

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

POWER INTEGRATIONS, INC.,

Plaintiff,

v.

FAIRCHILD SEMICONDUCTOR  
INTERNATIONAL, INC., and FAIRCHILD  
SEMICONDUCTOR CORPORATION,

Defendants.

C.A. No. 04-1371-JJF

**NOTICE OF PRIOR ART PURSUANT TO 35 U.S.C. SECTION 282**

PLEASE TAKE NOTICE, pursuant to 35 U.S.C. Section 282, that the following may be relied upon to support Fairchild Semiconductor International, Inc.'s and Fairchild Semiconductor Corporation's (collectively "Fairchild") claims that United States Patents Nos. 4,811,075 ('075 patent); 6,107,851 ('851 patent); 6,229,366, ('366 patent); and 6,249, 876 ('876 patent) are invalid because they were invented by another, anticipated, and obvious.

**A. Patents**

1. United States Patent Number 5,631,920, Spread Spectrum Clock Generator, K. Hardin, Issued May 20, 1997 (produced as Bates Nos. FCS0527468-78) was published as of May 20, 1997.
2. United States Patent Number 4,507,796, Electronic Apparatus Having Low Radio Frequency Interference From System Clock Signal, D. Stumfall, Issued March 26, 1985 (produced as Bates Nos. FCS1688159-65) was published as of March 26, 1985.
3. United States Patent Number 4,638,417, Power Density Spectrum Controller, H. Martin, G. Hitler & D. Parsley, Issued January 20, 1987 (produced as Bates Nos. FCS0525445-8) was published as of January 20, 1987.
4. United States Patent Number 5,498,995, Short Circuit Frequency Shift Circuit for Switching Regulators, T. Szepesi & H. Santo, Issued March 12, 1996 (produced as Bates Nos. FCS0524804-20) was published as of March 12, 1996.

5. United States Patent Number 5,555,168, Frequency Modulated Switching Power Supply, B. Ferrario, Issued September 10, 1996 (produced as Bates Nos. FCS0524821-6) was published as of September 10, 1996.
6. United States Patent Number 4,626,879, Lateral Double Diffused MOS Transistor Devices Suitable for Source-Follower Applications, S. Colak, Issued December 2, 1986 (produced as Bates Nos. FCS0000526-32; FCS0526662-8) was published as of December 2, 1986.
7. United States Patent Number 6,005,444, Circuits For Producing Control Currents For a Current Controlled Oscillator, Carpelan, Issued December 21, 1999 (produced as Bates Nos. FCS1691477-98) was published of December 21, 1999.
8. United States Patent Number 5,604,465, Adaptive Self-Calibration For Fast Tuning Phaselock Loops, Farabaugh, Issued February 18, 1997 (produced as Bates Nos. FCS1691499-509) was published as of February 18, 1997.
9. United States Patent Number 4,823,173 J. Beasom, Issued April 18, 1989 (produced as Bates Nos. FCS0525249-56) was published as of April 18, 1989.
10. United States Patent Number 5,264,719, J. Beasom, Issued November 23, 1993 (produced as Bates Nos. FCS0525257-72) was published as of November 23, 1993.

**B. Publications (reference is to all pages unless otherwise indicated)**

11. A. C. Wang & S. R. Sanders, Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters, IEEE Transactions on Power Electronics, Vol. 8, No. 4, pp. 596 – 605 (Oct. 1993) (produced as Bates Nos. FCS0000516-25; FCS0524402-11; FCS0525273-82) was published as of October 1993.
12. F. J. De Stasi & T. Szepesi, A 5A 100KHz Monolithic Bipolar DC/DC Converter, The European Power Electronics Association, pp. 201 – 208 (1993) (produced as Bates Nos. FCS0524438-45) was published as of 1993.
13. B. Andreyckak, The UC3823A, B and UC3825A, B Enhanced Generation of PWM Controllers, Unitrode Application Note U –128 (1994) (produced as Bates Nos. FCS0524551-59) was published as of 1994 .
14. Toko, Power Conversion IC Data Book TK75001, pp. 3-1 – 3-12 (1996) (produced as Bates Nos. FCS0002173-85; FCS0524981-92; FCS0525246-48 (figures only); FCS0002145-53) was published as of 1996.

15. National Semiconductor, Power ICs Databook, LM2577, 2587, pp. 3-60 – 3-139 (1995) (produced as Bates Nos. FCS0524993-5038) was published as of 1995.
16. National Semiconductor, LM2671, pp. 1-22 (Aug. 1997) (produced as Bates Nos. FCS0002451-76; FCS0525161-86; FCS0527249-70) was published as of August 1997.
17. Motorola, Analog/Interface ICs Databook, MC34023, Vol. 1, pp. 3-247 – 3-262 (1995) (produced as Bates Nos. FCS0001324-42; FCS0002154-72; FCS0525239-45; FCS0527069-85) was published as of 1995.
18. T. Habetler & D. Divan, Acoustic Noise Reduction in Sinusoidal PWM Drives Using a Randomly Modulated Carrier, IEEE Transactions on Power Electronics, Vol. 6, No. 3, pp. 356 – 363 (Jul. 1991) (produced as Bates Nos. FCS0000508-15; FCS0528052-60; FCS052583-90) was published as of July 1991.
19. Philips Semiconductors, GreenChip SMPS Control IC, TEA1504 (Mar. 17, 1998) (produced as Bates Nos. FCS0525319-38; FCS0526984-98) was published as of March 17, 1998.
20. Motorola, High Speed Double –Ended PWM Controller, MC34025, MC33025 (1993) (produced as Bates Nos. FCS0525640-66; FCS0527097-99; FCS1686752-4) was published as of 1993.
21. Maxim, 5V –to –3.3V, Synchronous, Step –Down Power –Supply Controller, MAX767 (May 1994) (produced as Bates Nos. FCS0525696-98; FCS0527050-64; FCS0525699-703) was published as of May 1994.
22. Maxim, Dual –Output Power –Supply Controller for Notebook Computers, MAX786 (May 1994) (produced as Bates Nos. FCS0525738-45; FCS0527045-9) was published as of May 1994.
23. Maxim, 5V/3.3V/3V 5A Step –Down, PWM, Switch –Mode DC –DC Regulators, MAX796 –MAX799 (Nov. 1, 1994) (produced as Bates No. FCS0525749) was published as of November 1, 1994.
24. F. Goodenough, Off –Line PWM Switching Regulator IC Handles 3W, Electronic Design (Mar. 22, 1990) (produced as Bates Nos. FCS0525776-9; FCS0528084-9) was published as of March 22, 1990.
25. R. Frank, et. al., LM3001/LM3101 A 1 MHz Off –Line PWM Controller Chipset with Pulse Communication for Voltage –Current – or Charge – Mode Control, AN –918, National Semiconductor (Jan. 1994) (produced as Bates Nos. FCS0525786-93; FCS0527208-15) was published as of January 1994.
26. National Semiconductor, LM2588 SIMPLE SWITCHER 5A Flyback Regulator with Shutdown (Mar. 1996) (produced as Bates Nos. FCS0526814-41) was published as of March 1996.

27. National Semiconductor, LM1577/LM2577 SIMPLE SWITCHER Step Up Voltage Regulator, Power IC's Databook, pp. 3-80 – 3-101 (1995) (produced as Bates Nos. FCS0001343-64; FCS0002186-207; FCS0526903-10) was published as of 1995.
28. Linear Technology, LTC1435 High Efficiency Low Noise Synchronous Step-Down Switcher Regulator, pp. 4-212 – 4-225 (1996) (produced as Bates Nos. FCS0527031-44; FCS1686809-22) was published as of 1996.
29. Linear Technology, LTC1553 5 –Bit Programmable Synchronous Switching Regulator Controller for Pentium Pro Processor, pp. 4-289 – 4-305 (Feb. 1997) (produced as Bates Nos. FCS0527100-16; FCS01686780-96) was published as of February 1997.
30. Linear Technology, LTC1504 500mA Low Voltage Step –Down Synchronous Switching Regulator, pp. 4-257 – 4-268 (1996) (produced as Bates Nos. FCS0527117-28; FCS1686797-808) was published as of 1996.
31. Unitrode Integrated Circuits, UC1823A,B/1825A,B, UC2823A,B/2825A,B, UC3823A,B/3825A,B, pp. 5-119 – 5-126 (June 1993) (produced as Bates Nos. FCS0527155-62) was published as of June 1993.
32. Unitrode Integrated Circuits, UC1823, UC2823, UC3823 High Speed PWM Controller, pp. 5-113 – 5-118 (June 1993) (produced as Bates Nos. FCS0527200-7; FCS1686852-7) was published as of June 1993.
33. Cherry Semiconductor, Enhanced Current Mode PWM Controller with SYNC, CS –51021/51023, pp. 91 – 98 (Feb. 20, 1997) (produced as Bates Nos. FCS0527221-8; FCS1686772-9) was published as of February 20, 1997.
34. National Semiconductor, LM2672 SIMPLE SWITCHER Power converter High Efficiency 1A Step Down Voltage Regulator with Features, pp. 1 –6 (Apr. 1997) (produced as Bates Nos. FCS0527243-8) was published as of April 1997.
35. National Semiconductor, LM2597 SIMPLE SWITCHER Power Converter, pp. 1-28 – 1-34 (1995) (produced as Bates Nos. FCS0527271-98; FCS0002417-50) was published as of 1995.
36. Unitrode Integrated Circuits, UNITRODE u –128, Application note, the UC3823A,B and UC3825A,B Enhanced Generation of PWM Controllers, pp. 10-228 – 10-236 (1994) (produced as Bates Nos. FCS0527322-30; FCS1686710-8) was published as of 1994.
37. Unitrode Integrated Circuits, UCC 3800/1/2/3/4/5 biCMOS CURRENT MODE CONTROL IC's (U –133), pp. 9-344 – 9-362 (1994) (produced as Bates Nos. FCS0527413-31; FCS1686719-36) was published as of 1994.
38. Unitrode Integrated Circuits, UCC1810, UCC2810, UCC3810 Low Power BiCMOS Dual Current Mode PWM, pp. 6-145 – 6-151 (Dec. 1994) (produced as Bates Nos. FCS0527440-6; FCS1686703-9) was published as of December 1994.

39. P. Horowitz & I. Robinson, Laboratory Manual for The Art of Electronics, pp. 17-1 – 17-3 (Aug. 6, 1981) (produced as Bates Nos. FCS0527486-90; FCS1686642-6) was published as of August 6, 1981.
40. National Semiconductor, LM3001 Primary –Side PWM Driver, pp. 3-140 – 3-159 (1995) (produced as Bates Nos. FCS0527129-48; FCS1686823-42) was published as of 1995.
41. SGS –Thompson, TEA2262, Switch Mode Power Supply Controller, pp. 1 – 9 (Apr. 1996) (produced as Bates Nos. FCS1686647-55) was published as of April 1996.
42. C. Hoekstra, Frequency Modulation of System Clocks for EMI Reduction, Hewlett –Packard Journal Article 13, pp. 1 – 7 (Aug. 1997) (produced as Bates Nos. FCS1686656-62) was published as of August 1997.
43. Unitrode Integrated Circuits, UC1823, UC2823, UC3823 High Speed PWM Controller (Jun. 1993) (produced as Bates Nos. FCS0527200-7; FCS1686852-7) was published as of June 1993.
44. Unitrode Integrated Circuits, UC1875/6/7/8, UC2875/6/7/8, UC3875/6/7/8 Phase Shift Resonance Controller (May 1993) (produced as Bates Nos. FCS0527191-9) was published as of May 1993.
45. Unitrode Integrated Circuits, UCC1800/1/2/3/4/5, UCC2800/1/2/3/4/5, UCC3800/1/2/3/4/5, Low-Power BiCMOS Current-Mode PWM (May 1993) (produced as Bates Nos. FCS0527432-35; FCS1686737-40) was published as of May 1993.
46. Unitrode Integrated Circuits, UCC1807-1/-2/-3, UCC2807-1/-2/-3, UCC3807-1/-2/-3 Low Power BiCMOS Current Mode PWM (Jan. 1995) (produced as Bates Nos. FCS0527436-9; FCS0527457-8; FCS1686699-702) was published as of January 1995.
47. National Semiconductor, Data Acquisition Databook (1995) (produced as Bates Nos. FCS0527453-5) was published as of 1995.
48. Unitrode Integrated Circuits, UC1828, 2828, 3828, 1840, 2840, 3840, 1841, 2841, 3841, 1848, 2848, 3848, 1851, 2851, 3851, 1854, 2854, 3854, 1874-1, -2, 2874-1, -2, 3874-1, -2, Unitrode Current Mode PWM Controller IC (Nov. 1994) (produced as Bates Nos. FCS0527459-67) was published as of November 1994.
49. U. Tietze & Ch. Schenk, Advanced Electronic Circuits (1978) (produced as Bates Nos. FCS0527482-5) was published as of 1978.
50. D. Sheingold, Analog Digital Conversion Handbook, Prentice Hall, pp. 124-126 (1986) (produced as Bates Nos. FCS0527491-5) was published as of 1986.
51. Unitrode Integrated Circuits, Unitrode Resonant Mode Power Supply Controller UC1860, 2860, 3860 (Oct. 1993) (produced as Bates Nos. FCS0527308-15) was published as of October 1993.

52. SGS-Thompson, TEA2260, TEA2261 Switch Mode Power Supply Controller (Jun. 2, 1992) (produced as Bates Nos. FCS1687336-44) was published as of June 2, 1992.
53. SGS-Thompson, Application Note: TEA2260, TEA2261 High Performance Driver Circuits for S.M.P.S., Application Note AN376 (June 1994) (produced as Bates Nos. FCS1687345-78) was published as of June 1994.
54. S. Sze, Physics of Semiconductor Devices, pp. 431-438, 486-491 (1981) (produced as Bates Nos. FCS0000543-58) was published as of 1981.
55. M. Pocha, Tradeoff Between Threshold Voltage and Breakdown in High-Voltage Double-Diffused MOS Transistors, IEEE Transactions On Electron Devices, Vol. ED-25, No. 11, pp. 1325-1327 (Nov. 1978) (produced as Bates Nos. FCS1689179-81) was published as of November 1978.
56. Z. Parpia, A Novel CMOS-Compatible High-Voltage Transistor Structure, IEEE Transactions on Electron Devices, Vol. ED-33, No. 12, pp. 1948-1952 (Dec. 1986) (produced as Bates Nos. FCS1689182-6) was published as of December 1986.
57. H. Wakaumi, A Highly Reliable 16 Output High Voltage NMOS/CMOS Logic IC With Shielded Source Structure, IEDM 83, pp. 416-419 (1983) (produced as Bates Nos. FCS1689187-92) was published as of 1983.
58. A. Ludikhuizen, High-Voltage DMOS and PMOS in Analog IC's, IEDM 82, pp. 81-84 (1982) (produced as Bates Nos. FCS1689193-6) was published as of 1982.
59. Unitrode Integrated Circuits, UC1827-1/-2, UCC2827-1/-2, UCC3827-1/-2 Buck Current/Voltage Fed Push-Pull PWM Controllers (Mar. 1998) (produced as Bates Nos. FCS0527216-20) was published as of March 1998.
60. I. Wacyk, M. Amato & V. Rummennick, A Power IC with CMOS Analog Control (1986) (produced as Bates Nos. FCS1689202-3) was published as of 1986.
61. S. Sun, Physics and Technology of Power MOSFETS (Dissertation) (1982) (produced as Bates Nos. FCS1689204-436) was published as of 1982.
62. P. Horowitz & W. Hill, The Art of Electronics, 2nd Ed., pg. 624 (1989) (produced as Bates Nos. FCS0527450-2) was published as of 1989.
63. Unitrode Integrated Circuits, Application Note for U-100A: The UC3842/3/4/5 Series of Current-Mode PWM IC's (Jun. 1993) (produced as Bates Nos. FCS1688283-4; FCS1691458-9) was published as of June 1993.



64. Unitrode Integrated Circuits, Application Note for U-96A: A 25 Watt Off-Line Flyback Switching Regulator (Jun. 1993) (produced as Bates Nos. FCS1688295-9; FCS1691458-9) was published as of June 1993.
65. R. Keller, Power Integrations, Off-Line Power Integrated Circuit for International Rated 60-Watt Power Supplies, (Feb. 23-27, 1992) (produced as Bates Nos. FCS0524577-84; FCS0527805-14) was published as of February 27, 1992.
66. Power Integrations, PWR-SMP240 PWM Power Supply IC 85-265 VAC Input Isolated, Regulated DC Output (Feb. 1992) (produced as Bates Nos. FCS1685819-31) was published as of February 1992.
67. Power Integrations, Application Note AN-11: Function and Application of the PWR-SMP240/260 (Mar. 1992) (produced as Bates Nos. PIF 131267-82) was published as of March 1992.
68. Power Integrations, Design Aid DA-5: Charging Batteries with the PWR-SMP260 (Mar. 1992) (produced as Bates Nos. PIF 131293-9) was published as of March 1992.
69. Power Integrations, PWR-EVAL8: PWR-SMP240 Evaluation Board 110/220 VAC Input Isolated 5/12V, 20W (Total) Output (Feb. 1992) (produced as Bates Nos. PIF 131229-46) was published as of February 1992.
70. Power Integrations, PWR-SMP260 PWM Power Supply IC 85-265 VAC Input Isolated, Regulated DC Output (Feb. 1992) (produced as Bates Nos. FCS1685806-18) was published as of February 1992.
71. Power Integrations, 1-Watt Buck Regulator IC – 20-72 VDC Input Non-insolated DC Output, SMP402 (Jan. 1996) (produced as Bates Nos. FCS0525806-21; FCS0527351-68) was published as of January 1996.
72. Power Integrations, SMP211 PWM Power Supply IC 85-265 VAC Input Isolated, Regulated DC Output (Jan. 1996) (produced as Bates Nos. FCS1686663-81; FCS1685478-96) was published as of January 1996.
73. Power Integrations, PWR-SMP3 PWM Power Supply IC 120 VAC Input (Jul. 1991) (produced as Bates Nos. FCS1687321-30) was published as of July 1991.
74. Power Integrations, Application Note AN-6: Designing Power Supplies with PWR-SMP3 (Jul. 1991) (produced as Bates Nos. PIF 131247-66) was published as of July 1991.
75. Power Integrations, PWR-EVAL1: PWR-SMP3 Evaluation Board 110 VAC Input Isolated 5V, 5W Output (Mar. 1992) (produced as Bates Nos. PIF 131195-210) was published as of March 1992.
76. Power Integrations, PWR-EVAL7: PWR-SMP260 Evaluation Board 110/220 VAC Input Isolated 5/12V, 30W (Total) Output (Mar. 1992) (produced as Bates Nos. PIF 131211-28) was published as of March 1992.

77. Power Integrations, PWR-SMP260 Design Specification, Rev. 2 (Jul. 12, 1991) (produced as Bates Nos. PIF 129993-5) was published as of July 12, 1991.
78. Power Integrations, Design Schematic PS07, (sheets 1-28) (1990-1991) (produced as Bates Nos. PIF129750-77) was published as of 1991.
79. Power Integrations, Design Schematic PS03 (Feb. 27-28, 1990) (produced as Bates Nos. PIF129301-21) was published as of February 28, 1990.
80. Power Integrations, Design Schematic PS10, (sheets 1-30) (1990-1992) (produced as Bates Nos. PIF129454-84) was published as of 1992.

**C. Prior Inventors, Persons with Prior Knowledge, Prior Users, and Prior Sellers**

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Dated: August 31, 2006

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**CERTIFICATE OF SERVICE**

I hereby certify that on the 31<sup>st</sup> day of August, 2006, the attached **NOTICE OF PRIOR ART PURSUANT TO 35 U.S.C. SECTION 282** was served upon the below-named counsel of record at the address and in the manner indicated:

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*/s/ John G. Day*

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